

# **E**FARFISA

**ELECTRONIC ORGANS**

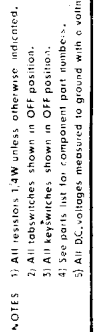
MOD 151~152


---

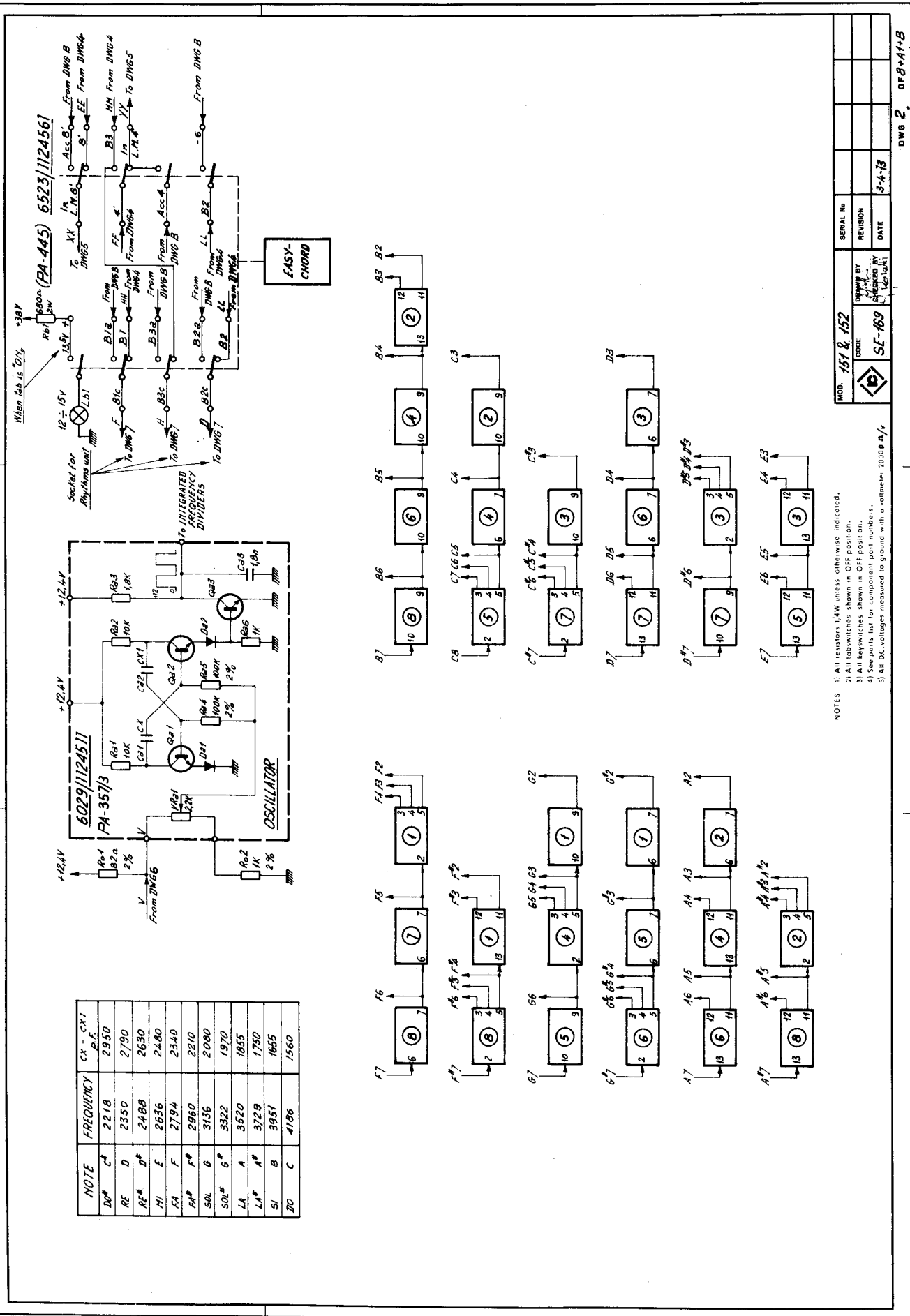
**SCHEMATIC DIAGRAMS**

---

DWG 1 OF 8+A1+B



	CODE	MOD. 151 & 152	SERIAL No								
	DRAWN BY Hick									REVISION	
	CHECKED BY SE-169									DATE	



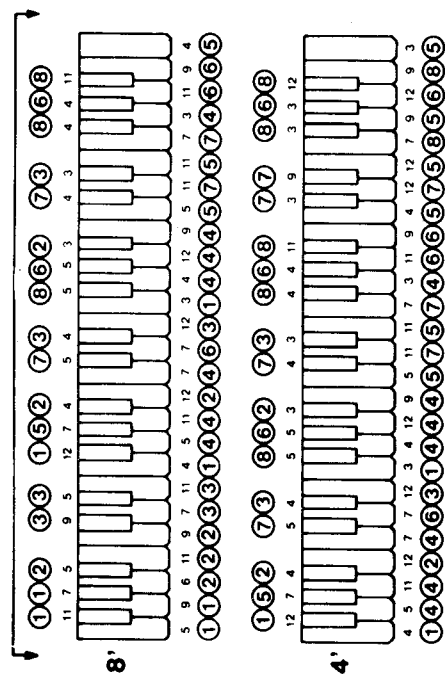
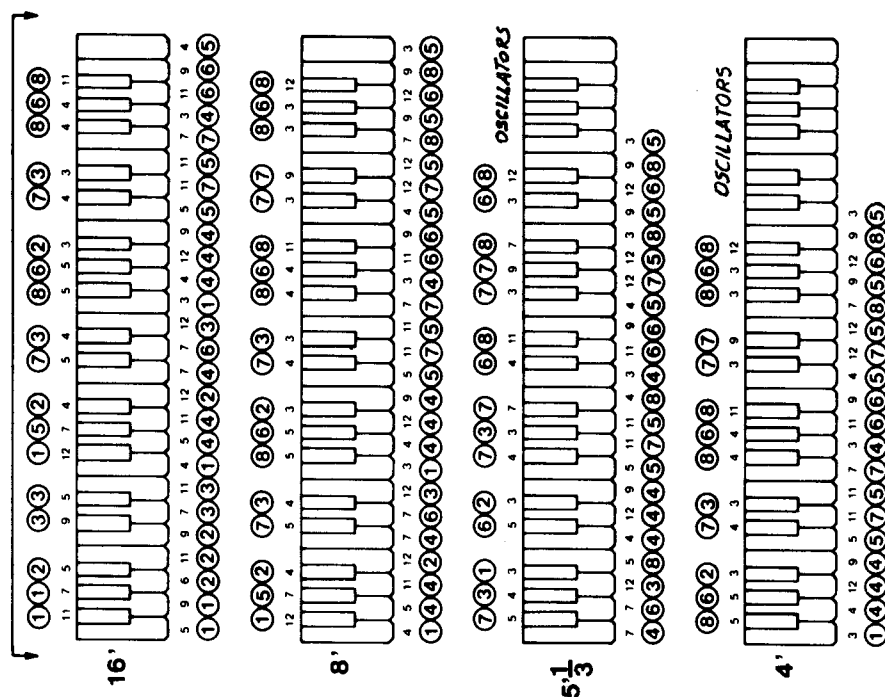
NOTES: 1) All resistors 1/4W unless otherwise indicated.  
 2) All tabswitches shown in OFF position.  
 3) All keyswitches shown in OFF position.  
 4) See parts list for component part numbers.  
 5) All DC-voltages measured to ground with a voltmeter 20000  $\Omega/V$ .

MOD.	151 B. 152	CODE	SE-103	SERIAL No.	
DESIGNED BY	10/15/41	REVISION		DATE	3-4-73
DWG 2	OF 8-A1-B				

# REFERENCE TABLE KEY to GENERATOR-BOARD

## UPPER MANUAL

## LOWER MANUAL



### NOTES:

- 1) The tone generator of the keyboard notes are indicated with two numbers. The circled number, that appears also on the printed circuit board PA-447a indicates the integrated circuit; the second number indicates the integrated circuit pin.
- 2) Assembly of the I.C.s. should be made as shown in figures 1. and 2.

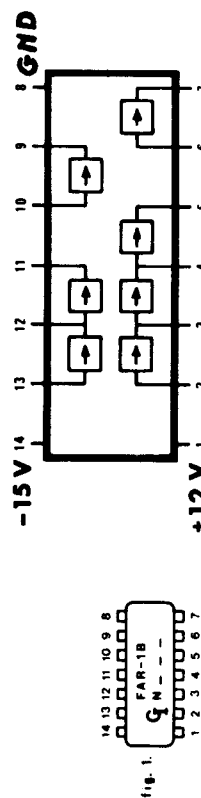
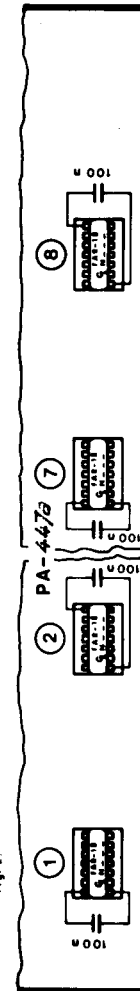
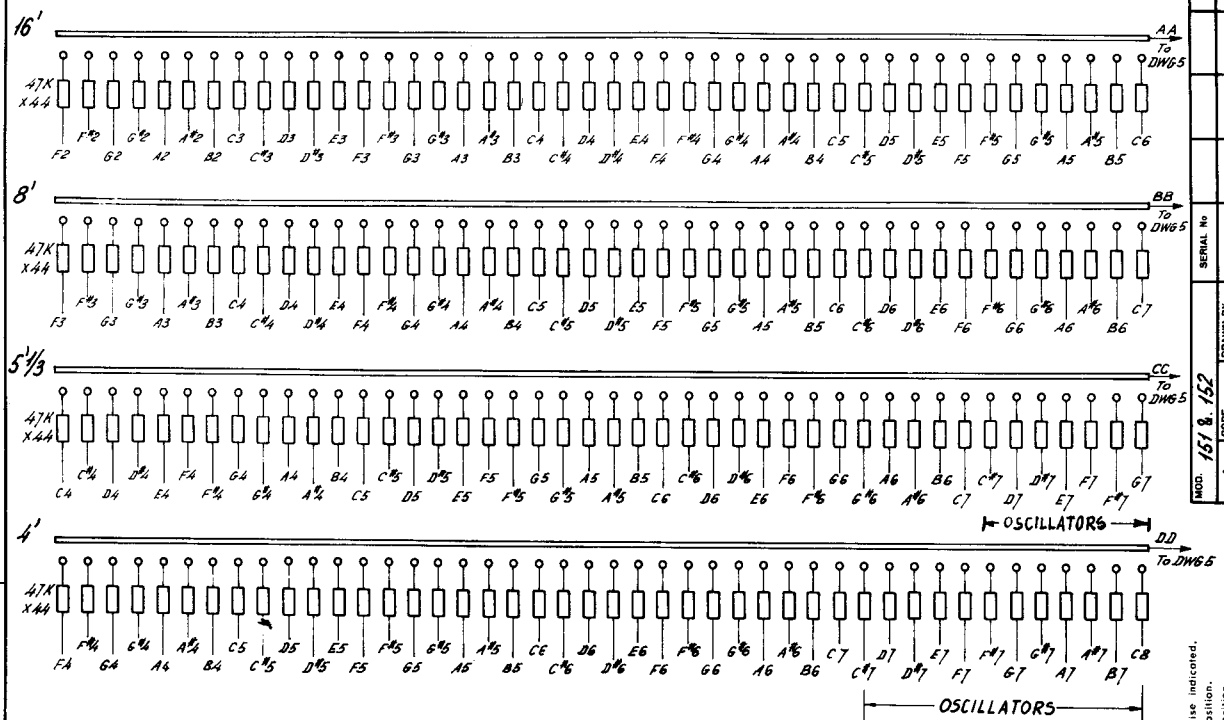


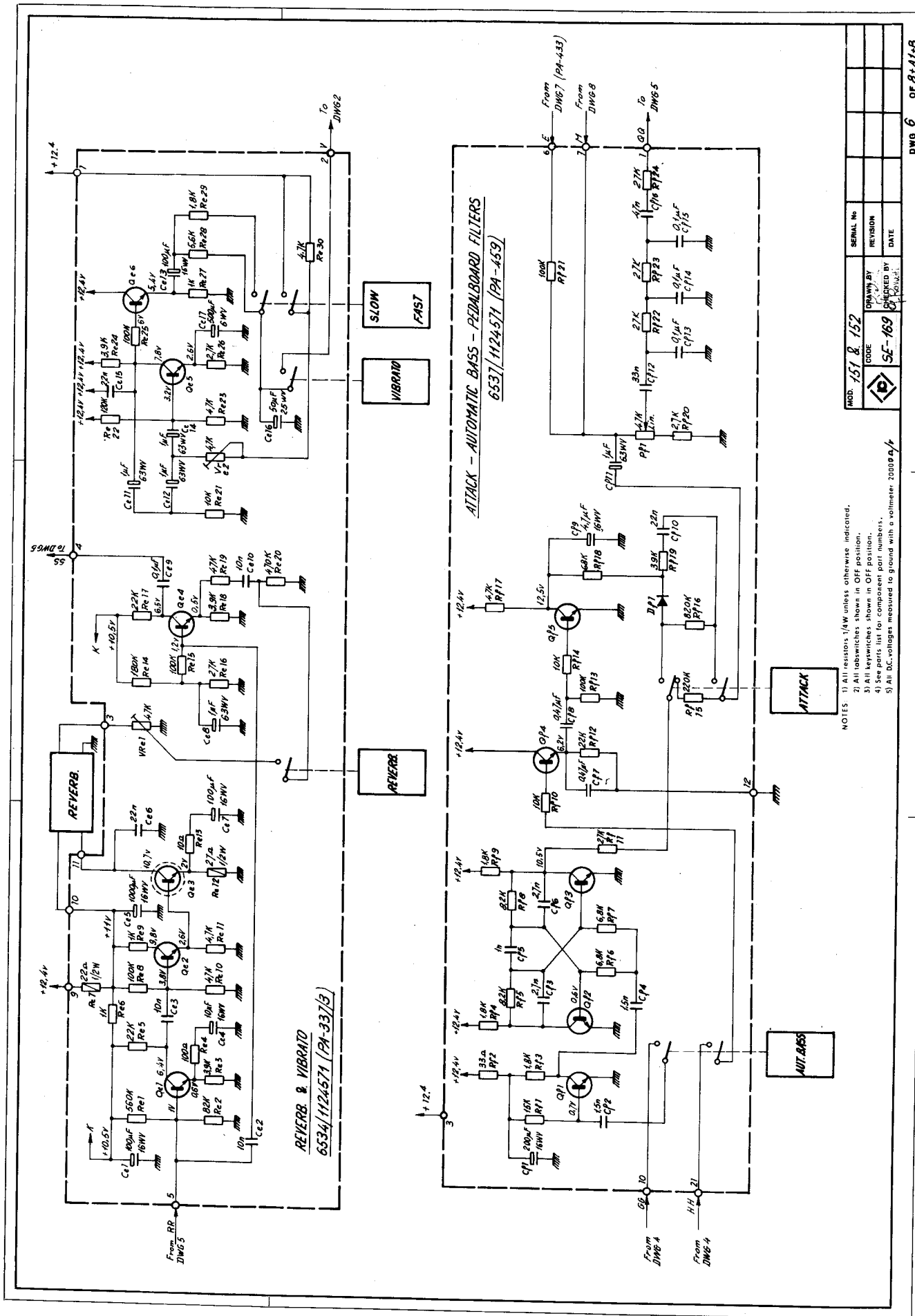
Fig. 1.



MOD 151 B.152	SERIAL No.	DATE
CODE	REVISION	DATE
SE-169	3-3-73	







MOD. 151 & 152

DATE

REVISION

SERIAL No

DESIGNED BY

CHECKED BY

DATE

REVISION

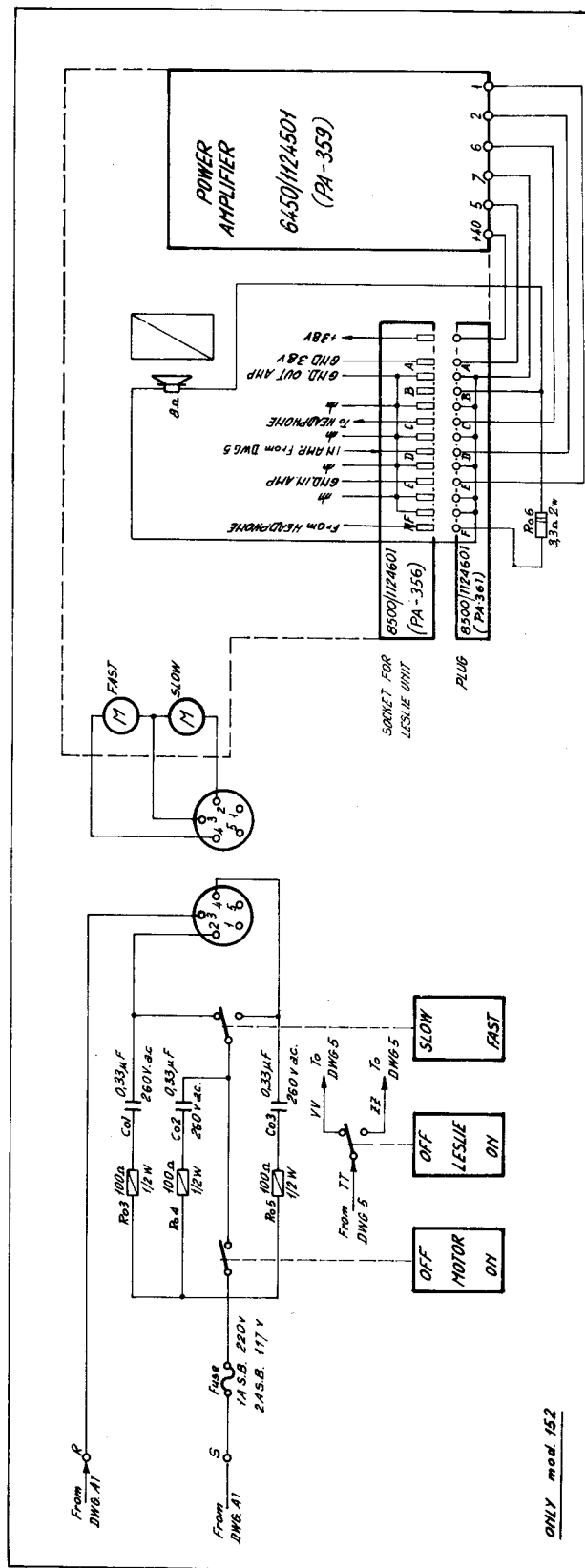
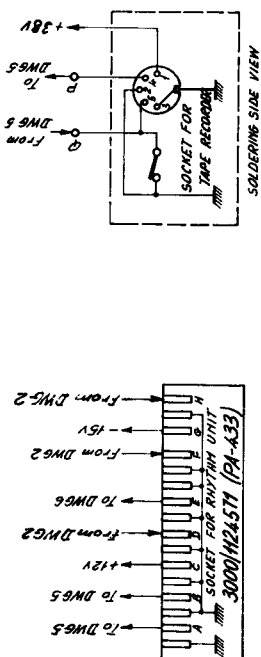
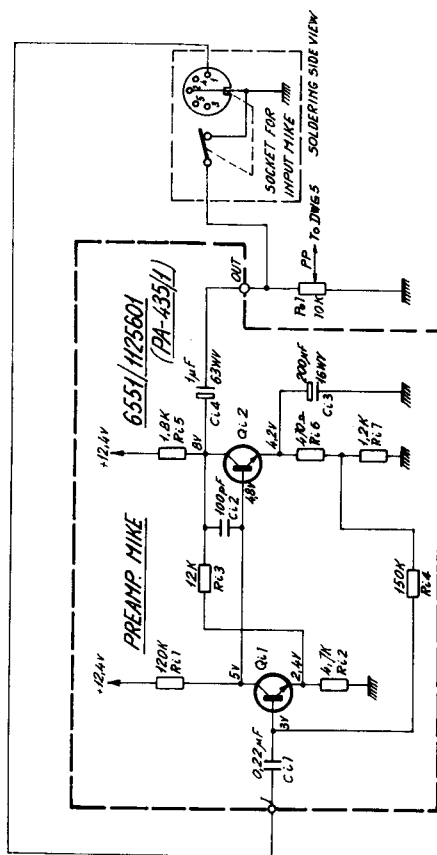
SERIAL No

DESIGNED BY

CHECKED BY

DATE

N.B.: The points B-4m are directly connected on models 151-152/without PARTNER 15)



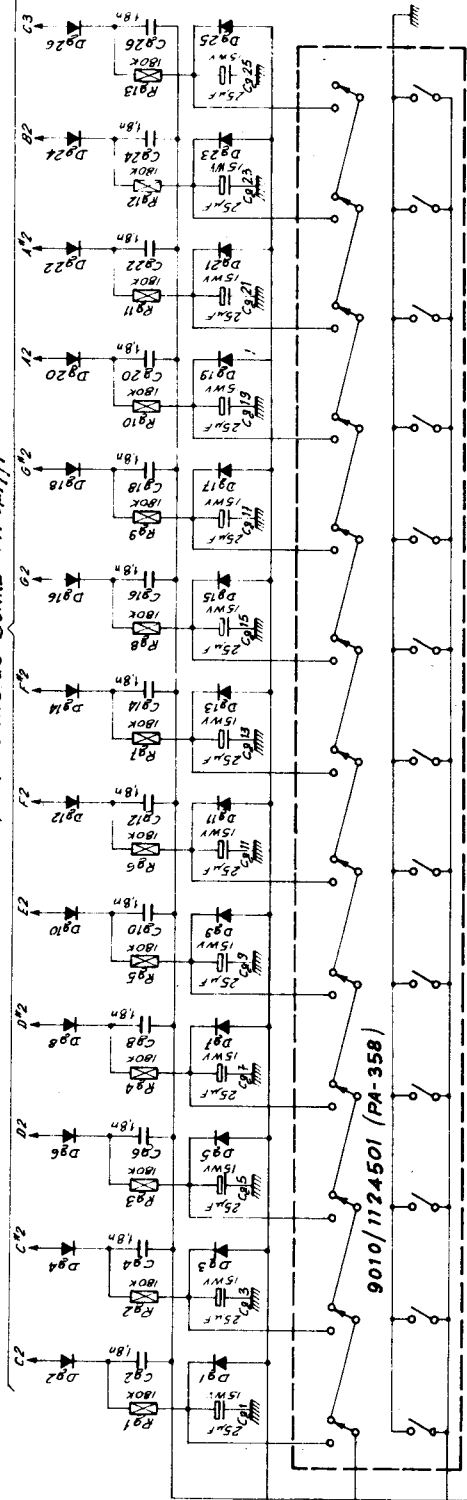
ONLY mod. 152

- NOTES
- 1) All resistors 1/4W unless otherwise indicated.
  - 2) All labswitches shown in OFF position.
  - 3) All keyswitches shown in OFF position.
  - 4) See parts list for component part numbers.
  - 5) All DC voltages measured to ground with a voltmeter 20000Ω/V

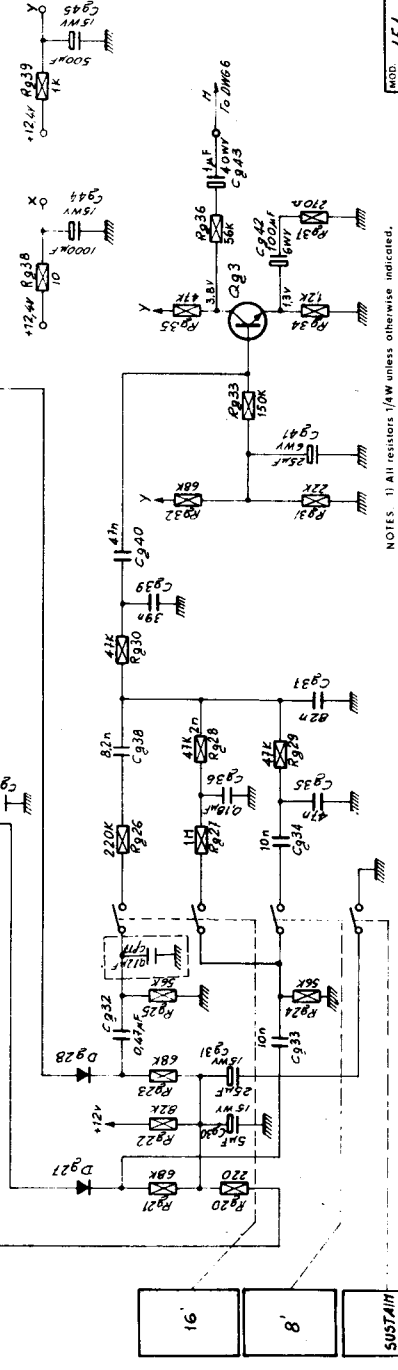
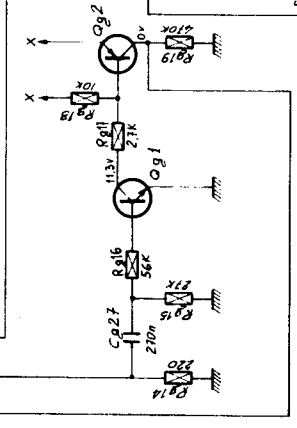
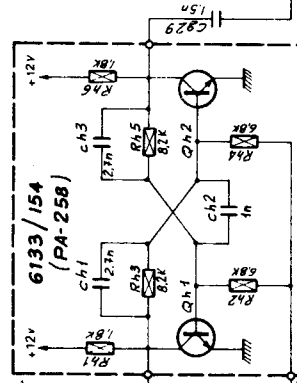
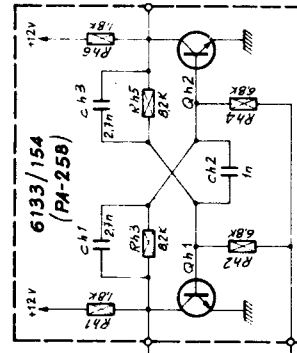
MOD. 151-152	SERIAL No.	DATE
CODE	REVISION	3-3-73
5F-169	BY	
	CHECKED BY	



TO KEYSWITCHES BOARD PA-44711



6460/1124511  
(PA-252/1)



NOTES: 1) All resistors 1/4W unless otherwise indicated.  
2) All labels shown in OFF position.  
3) All keyswitches shown in OFF position.  
4) See parts list for component part numbers.  
5) All DC voltages measured to ground with a voltmeter. 2000R 2/4

MOD. 151 & 152	REV. 1	DATE
SE-169	REV. 1	DATE
3-3-73		





# Models 151 & 152

TRANSISTORS (Q) & DIODES (D) LIST

①

Schem. Ref.	Circuit	Type	Part Code
<u>CHASSIS</u>	<u>POWER SUPPLY CHASSIS (DWG A1/SE 166)</u>		<u>8000/1124601</u>
Q 2	Series Stabilizer.....	Westinghouse 156 - 043 Solitron H 9340.....	W/1800 W/1800
D 2	Rectifier Bridge.....	ITT STANDARD B 40-C 2200 SIEMENSE B 40-C 2200 AEG B 40-C 2200	Y/14 - Y/15 Y/14 - Y/15 Y/14 - Y/15
<u>PA 355</u>	<u>VOLTAGE REGULATOR BOARD (DWG A1/SE 166)</u>		<u>6449/1124501</u>
Q 1	Series Stabilizer.....	SGS BC 286.....	W/1601
D 1	Rectifier Diode (Bridge).....	MISTRAL SFD 182..... TEXAS 1N 914.....	B/77 B/108
Z 1	Voltage Reference-Diode Zener.. (13V-1W)	IRCI 1 Z 13..... MOTOROLA 1N4743.....	B/105 B/105
Z 2	Voltage Reference-Diode Zener.. (15V-400mV)	ITT STANDARD ZF 15.... MOTOROLA 1N5245-B.....	B/106
<u>PA 359</u>	<u>POWER AMPLIFIER BOARD (DWG A1/SE 166)</u>		<u>6450/1124601</u>
Q 3	Input Preamplifier PNP.....	SGS 1W 9640.....	W/89 - W/1500
Q 4	Temperature Compensator.....	MISTRAL BC 207 A or B. BC 209 B or C.	W/1401 W/1407 - W/1410
Q 5	Driver Amplifier NPN.....	SGS BC 286.....	W/1601
Q 6	Driver NPN.....	SGS BC 286.....	W/1601
Q 7	Driver PNP.....	SGS BC 287.....	W/1702
Q 8 - Q 9	Power Transistors.....	WESTINGHOUSE 156-043.. SOLITRON H 9340.....	W/1800 W/1800

# Models 151 & 152

TRANSISTORS (Q) & DIODES (D) LIST

2

Schem.Ref.	Circuit	Type	Part Code
<u>PA 357 - 3</u>	<u>OSCILLATOR (DWG 2/ SE 169)</u>		<u>6029/1124511</u>
Q a 1	MVBTR. Master Oscillator.....	BC 108 A,B or C.....	W/1406
		BC 109 - B or C.....	W/1409 - W/1412
Q a 2	MVBTR. Master Oscillator.....	BC 208 A,B or C.....	W/1404
		BC 209 - B or C.....	W/1407 - W/1410
Q a 3	Buffer Amplifier.....	2N5172.....	W/1425
D a 1	Base Breakdown Protection.....	SGS 1X9809.....	B/34
D a 2			
<u>PA 447 - 1</u>	<u>KEYSWITCH BOARD U.M. (DWG 4/ SE 169)</u>		<u>6533/1124571</u>
I.C. 1 - 8	Integrated Frequency Divider..	GIE.....	W/1100 - W/1101
<u>PA 427</u>	<u>KEYSWITCH BOARD L.M. (DWG 4/ SE 169)</u>		<u>6454/1124511</u>
I.C. 1	Integrated Frequency Divider..	GIE.....	W/1100 - W/1101
<u>PA 456</u>	<u>UPPER MANUAL FILTERS BOARD (DWG 5/ SE 169)</u>		<u>6535/1124571</u>
Q c 1	Lesliechannel Preamplifier....	{ BC 209 - B red dot.... BC 239 - B red dot....	W/1413
Q c 2	Lesliechannel Final Preamplifier		
Q c 3	Mainchannel Preamplifier.....		
Q c 4	Mainchannel Final Preamplifier		
<u>PA 337 - 3</u>	<u>REVERB. VIBRATO BOARD (DWG 6/ SE 169)</u>		<u>6534/1124571</u>
Q e1-Q e2	Reverberation Preamplifier....	BC 109 B or C..... BC 209 B or C.....	W/1409 - W/1407
Q e 3	Reverberation Driver.....	SGS BC 286.....	W/1601
Q e 4	Reverberation Preamplifier....	BC 109 B or C, red dot BC 209 B or C, red dot	W/1415 - W/1413
Q e 5	Vibrato Oscillator.....	{ BC 109 B or C..... BC 209 B or C.....	W/1409 - W/1407
Q e 6	Vibrato Buffer.....		

# Models 151 & 152

TRANSISTORS (Q) & DIODES (D) LIST

3

Schem. Ref.	Circuit	Type	Part Code
<u>PA 459</u>	<u>AUTOMATIC BASS - ATTACK BOARD (DWG 6/SE 169)</u>		<u>6537/1124571</u>
Q f 1	Automatic Bass Driver.....	G.E. 2N 5172.....	W/1425
Q f 2-Q f 3	Automatic Bass Frequency Divid	BC 109 B or C.....	W/1412 - W/1409
		BC 209 B or C.....	W/1407 - W/1410
Q f 4	Attack Control.....	BC 109 B or C.....	W/1412 - W/1409
		BC 209 B or C.....	W/1407 - W/1410
Q f 5	Attack Control.....	G.E. 2N 5172.....	W/1425
		BC 109 B or C.....	W/1412 - W/1409
		BC 209 B or C.....	W/1407 - W/1410
D f 1	Attack Gate.....	SGS 1X9809.....	B/34
		TEXAS D 525 A or B.....	B/110 - B/111
<u>PA 435 - 1</u>	<u>PREAMPLIFIER MIKE (DWG 7/ SE 169)</u>		<u>6551/1125601</u>
Q i 1-Q i 2	Preamplifier Transistors.....	BC 209 B or C.....	W/1413
		BC 239 B or C.....	
		BC 109 B or C.....	W/1416 - W/1415
		BC 149 B.....	W/1418 - W/1414
<u>PA 252 - 1</u>	<u>SUSTAIN - PEDALBOARD (DWG 8/ SE 169)</u>		<u>6460/1124511</u>
Q g 1	Pulse Amplifier.....	G.E. 2N 5172.....	W/1425
		BC 109 B or C.....	W/1412 - W/1409
		BC 209 B or C.....	W/1407 - W/1410
Q g 2	Reset.....	BFW 87 (Mullard).....	W/153
Q g 3	Audio Preamplifier.....	BC 109 B or C red dot..	W/1415 - W/1418
		BC 209 B or C red dot..	W/1413 - W/1416
D g1-D g26	Memory gate and Reset.....	SGS 1X9809.....	B/34
Dg27-D g28	Sustain gate.....	TEXAS D 252 A or B.....	B/110 - B/111

# Models 151 & 152

## TRANSISTORS (Q) & DIODES (D) LIST

4

Schem.Ref.	Circuit	Type	Part Code
<u>PA 258</u>	<u>DIVIDER MODULE (DWG 8/ SE 169)</u>		<u>6133/154</u>
Q h 1	Frequency Divider.....	G.E. 2N 5172.....	W/1425
Q h 2			
<u>PA 446</u>	<u>EASYCHORD MERORY (DWG B/ SE 174)</u>		<u>6530/1124601</u>
I.C. aa 1	Gate with 10 Emitter.....	GIE - MISTRAL.....	W/1100 - W/1101
I.C. aa 2	Divider Frequency.....	ITT - STANDARD TBA 470	W/1202
Z aa 1	Voltage Reference-Diode Zener (5,6-400mA)	ITT - STANDARD ZPD 5,6	B/69
		MULLARD BZX79 C5V6....	
		IRCI - 1N 752A.....	
		MOTOROLA - 1N 5232B...	
D aa 1	Matrix Diodes.....	[ SGS - IX9809..... TEXAS - D 525 A or B..	B/34
D aa 2	Diodes.....		B/110 - B/111
D aa 3	Threshold Diode.....		